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Hagerty

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[54] **DIFFERENTIAL PREAMPLIFIER AND PRE-EMPHASIS NETWORK**

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[58] **Field of Search** ..... 330/69, 84, 258, 330/259, 260, 306, 2, 298, 207 P; 367/131, 134, 135, 901

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[57] **ABSTRACT**

A preamplifier and pre-emphasis network is provided having a differential amplifier exhibiting common mode noise rejection. The preamplifier is particularly suited for use with a double-sided sensor element and it includes a double-sided, balanced calibration circuit. First and second variable gain buffers are joined to the differential amplifier for preventing current noise degradation at the differential amplifier inputs. A pre-emphasis network is further provided in conjunction with the variable gain buffers for providing balanced differential gain of the sensor element signal. Further elements of the invention provide for high and low pass filtering, and differential buffering of the output signal.

13 Claims, 2 Drawing Sheets